T. E. C.

THE VISIONETTE

24 Line Mechanical Television

DIRECT PICKUP LIVE ACTION

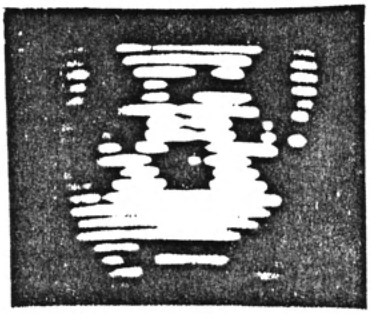
CAMERA KIT

FOR

Narrow Band Television

1928 Vintage Television using Nipkow Disks.

COMPLETE KIT INCLUDING ALL INSTRUCTIONS , TAKING LENS AND CABINET. INTENDED FOR USE WITH THE T. E. C. 24 LINE "VISIONETTE" RECEIVER.



Manufactured by the:
TESLA ELECTRONICS CO.
835 BRICKEN
ST. LOUIS, MO 63122

INSTRUCTIONS TO BUILD THE "VISIONETTE" CAMERA.

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CAMERA SPECIFICATIONS

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The VISIONETTE camera is a direct view type equipped with a NIPKOW disk to provide a linear scanning action. The disk operates in inconjunction with a mask, condenser lens and silicon photo cell. The output voltage of the cell is raised to useful levels by low noise, wide band, high gain operational amplifiers. The camera video signal and line rate are synchronized with the line frequency at all times.

This camera is designed to be used with a companion VISIONETTE receiver.

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SPECIFICATIONS:

POWER INPUT:	120 VAC, 60 hertz or 105 VAC, 50 hertz
SCANNING DISK:	8 1/4" diameter with spring coupling to the drive motor. This disk is equipped with 24 holes in a spiral that provides a .9"X.9" image. Scanning is from left to right and from top to bottom of the image.
SCANNING RATE:	24 lines, 30 frames/second. Non interlaced, linear scanning. (25 frames/second on 50 hertz)
MOTOR:	1800/1500 RPM, ball bearing, synchronous, split phase.
LIGHT REQUIREMENT:	Approximately 50 foot candles. A 150 watt reflector flood at 3 feet from a high contrast subject is usually sufficient.
OUTPUT SIGNAL:	6 volts peak, positive going into 1 Kohm (white is more positive). Coaxial cable coupling to receiver.
IMAGE LENS:	Single element, 100 mm, F:2.8, focussing mount
FOCUS RANGE:	Approximately 2 to 4 feet.
CAMERA AMPLIFIER:	Dual operational amplifier with built in isolated regulated power supply. Unbalanced input, unbalanced output
PICK UP DEVICE:	Large area silicon photo cell

GETTING STARTED on the VISIONETTE Camera

GENERAL:

The VISIONETTE camera consists of a motor driven Nipkow scanning disk operating in conjunction with a silicon photocell. A single element camera lens focusses an inverted image on the surface of the scanning disk. Light passing through the scanning holes is concentrated by a condensing lens, before falling on the silicon photocell. The signal output of the photocell is amplified and delivered to the VISIONETTE receiver by way of a coaxial cable.

PRELIMINARY:

The VISIONETTE camera kit is made up of the following parts and assemblies:

( ) 1) Synchronous motor
( ) 2) Two motor capacitors, 0.68 ufd, 400 volts
( ) 3) Scanning disk and hub assembly
( ) 4) Terminal strip
( ) 5) Image mask
( ) 6) Condenser lens
( ) 7) Image lens kit assembly
( ) 8) Silicon photocell
( ) 9) Shield kit assembly
( ) 10) Camera panel with support blocks
( ) 11) baseboard
( ) 12) Camera amplifier assembly
( ) 13) Power switch
( ) 14) Power line cord
( ) 15) Angle bracket kit
( ) 16) Cabinet kit
( ) 17) Instruction sheets and drawings

Check the list as you proceed in building the kit. This will give you an idea of how you are progressing towards its completion.

As you proceed, you will need to furnish the following: (or their equivalents)

Elmer's white glue or Carpenter's glue
Weldwood contact cement (not water based)
3 M Super 77 spray on adhesive
Soldering iron and rosin core solder and miscellaneous hand tools
Aluminum foil, sandpaper, drills, 82° countersink, clamps, etc.
Cabinet finishing products

FRONT PANEL & BASEBOARD ASSEMBLY

( ) 1) Use the drawing set to identify and locate the CAMERA PANEL and two SUPPORT BLOCKS.

( ) 2) Use a fine grade of sandpaper to smooth the edges and holes in the camera panel and support blocks. Temporarily locate the disk drive motor in the large center hole and see that the motor mounting flange lies flat against the board. If not, use a medium or course grade of sandpaper to uniformly enlarge the hole. When finished, refer to the CAMERA ASSY drawing and use the motor flange as a guide to mark the location of the mounting screw holes. Drill the four holes with a #28 or a 9/64 inch drill bit. Also locate and drill the hole for the terminal strip at this time. Use a #33 drill bit.

( ) 3) Using a #33 or a 1/8 inch bit, drill the two holes adjacent to the other large hole in the camera panel.

( ) 4) Locate, clamp and cement the support blocks in place. Use a white glue.

( ) 5) On the side opposite the support blocks, countersink the seven holes drilled in steps two and three. Countersink the holes, 1/8" inch deep.

( ) 6) Use the drawing set to identify and locate a BASEBOARD. Notice, it has a front and rear edge. Locate and drill the two #28 holes.

( ) 7) Refer to the CAMERA ASSY drawing and position the camera panel on the baseboard. Note that the panel is 1/2" from the wide side of the baseboard and centered in the other direction.

( ) 8) Use a pencil to make a light mark on the baseboard, around the two support blocks. Locate the center of each support block outline on the baseboard and drill and countersink, 1/8" deep, the baseboard using a #19 or a 3/16" inch bit. Temporarily re-locate the camera panel on the baseboard and use the holes just drilled as guides for marking the two support blocks. Use a sharp pointed tool such as an awl or a nail for this purpose. Drill through the support blocks at these points using a 3/32" bit. Install two #10 by 1" flathead wood screws in these holes to attach the panel to the baseplate. Use a square to see that the panel is at right angles to the base. If it isn't, light selective sanding on the support blocks should correct this. When it is "square", remove the screws and coat the edge of the panel and support blocks with white glue and re-assemble it with the screws.

( ) 9) Locate the large plastic condenser lens and use two 4X40X1/2" flathead screws to mount it with its flat surface over the 1 3/4" hole and the same side as the support blocks. Then mount the motor using 6X32X3/4" flathead screws, washers and nuts. Position the motor so that the wires exit in a direction opposite the support blocks. Mount the terminal strip with a single 4X40X1/2" screw and nut and rotate the strip so that the three insulated terminals in a row are "up".

PHOTOCELL LIGHT SHIELD ASSEMBLY

( ) 1) Refer to the SHIELD ASSY drawing and locate the P.E. CELL MOUNT. This is a small block of wood that supports the silicon cell and its loading resistor. Using the drawing as a guide, mount the cell, terminals and bushing. Be sure to mount the cell as shown, as polarity is important. Mount the resistor on the terminals. One wire from the resistor connects to the outer aluminum shield through the mounting bushing. The other end of the resistor connects to the center terminal of the RCA jack. Add a 2" length of small bare wire for that purpose. Solder the wires with a small iron and temporarily put this P.E. Cell Assembly aside for installation later.

( ) 2) Locate the 3" X 5" section of cardboard mailing tube and the REAR COVER. Refer to the drawing and using white glue, cement the rear cover to one end of the mailing tube. Cut a 5" X 5" square of aluminum foil. Spray one side of the square with a coat of 3M Super 77 spray on adhesive. Place one of the squares on rear cover and press it into place with a minimum of wrinkles. Wrap the edges of the square around the cover and onto the mailing tube surface.

( ) 3) Cut another piece of aluminum foil, 6" X 11" and coat one side as you did the first. Wrap the foil around the tube section with one of its long edges even with the rear cover. At the open end of the mailing tube, the foil is folded over the edge and into the inside of the tube. when finished, the rear cover and the outside surface of the tube should be completely covered with the foil. Using an ohmmeter, see that there is continuity between the foil covering the rear cover and the tube. If there is not, cut another 5" X 5" square of foil and apply it over the rear cover, in addition to the first layer.

( ) 4) Use a ball point pen to punch through the foil at two locations on the rear cover for the jack and the P.E. Cell mounting screw. Locate a RCA jack in the larger hole and hold the jack with pliers when tightening the nut inside the tube. Prevent the jack from twisting and tearing the foil around the jack.

( ) 5) Mount the P.E. Cell Assembly inside the shield and position the wire to the jack so it can be easily soldered. Use a 6 X 32 X 3/8" screw with a flat washer against the foil on the rear cover. Be careful to not tear the foil when tightening the screw. Solder the wire to the RCA jack. The cell should be located in the approximate center of the tube.

( ) 6) Use an ohmmeter to measure resistance at the RCA jack center connection and its outside shell. It should measure between 35,000 and 45,000 ohms. If not in this range, check the connections on the P.E. Cell Assembly and make any necessary corrections. Measure the resistance from the RCA jack outer shell to the aluminum foil on the rear cover. It must be near zero ohms.

( ) 7) Refer to the SHIELD ASSY drawing for the location of the felt strip over the open end of the mailing tube. This strip acts as a gasket between the shield assembly and the rear of the camera panel. It's purpose is to prevent light leakage from behind the camera, directly into the photocell. Locate the strip, lay it out flat and spray one side with the 3M spray adhesive. Wrap the felt strip around the open end of the tube so that the strip overhangs the edge of the tube approximately 1/4" inch. This completes the shield assembly. It will be installed later.

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INSTALLING THE IMAGE MASK

( ) 1) The purpose of the image mask is to allow only one scanning hole to be active at a time. The television image from the disk is trapezoidal in shape, with its base up. Because the image from the "taking" lens is inverted, the mask is mounted upside down. Refer to the FRONT PANEL drawing, (Camera).

( ) 2) Refer to the HUB drawing and install the disk hub on the motor shaft. Do not install the springs and set screw at this time. Place the scanning disk on the hub and position the mask behind it over the condenser lens opening. Center the mask from left to right and locate it vertically so that the first and last holes in the disk spiral coincide with the top and bottom of the image mask opening. It may be necessary to trim a bit of the outside edges of the mask away with scissors in order to accomplish this. With the mask in position, mark its location. Remove the mask and the disk. Using white glue, cement the mask into its proper position. Before the glue has a chance to set, place the disk on the hub and check that the location of the mask is satisfactory. See that the mask lies flat against the camera panel surface. When looking though the condenser lens at the mask, the image opening will be in the approximate center of the lens.

( ) 3) To prevent the rotating disk from striking and possibly damaging the mask, two 1 1/2" X 1/2" strips of felt are cemented beside the mask opening. Refer to the BASEBRD/MASK drawing for their location. Use spray adhesive on the felt for this purpose.

( ) 4) Cut three 1" square pieces of felt. Using the spray adhesive, cement these strips on the front of camera panel at the 9, 12 and 3 o'clock positions, at an approximate 3" radius around the motor shaft. These strips will prevent damage to the rotating scanning disk, should it contact the camera panel.

This completes the mask installation. Put the scanning disk aside as it will be installed later.

INSTALLING THE CAMERA AMPLIFIER

The amplifier is complete, tested and ready to install. It consists of an integrated circuit type, high gain, low noise wide band amplifier. There are no operator type adjustments inside the amplifier. The amplifier is enclosed in an aluminum case which is cemented to the AMPLIFIER MOUNTING BLOCK. Its location is not critical and mounting it consists of simply marking a location on the baseboard for screws to pass through and into the block. The mounting block is not cemented to the baseboard.

( ) 1) Refer to the MISC. ITEMS drawing and coat the AMPLIFIER MOUNTING BLOCK in the area described with contact cement. Coat the bottom (the side with the screw heads), of the amplifier in a similar manner. The holes in the block are for access to the two screws in the amplifier case. When cementing the case to the block, place it so that the two screws are visible through the holes.

( ) 2) The amplifier is held in place by two wood screws through the baseboard into the AMPLIFIER MOUNTING BLOCK. Refer to the CAMERA ASSY drawing for the location of the amplifier. Properly located, the amplifier power leads (two black wires), exit from the top of the case and two shielded leads exit from the bottom. The base of the AMPLIFIER MOUNTING BLOCK is against the rear of the right panel support block. Note the 2.75" dimension from the edge of the baseboard to the inward edge of the amplifier. Hold the mounting block in position and mark its location on the baseboard with a light pencil mark. Layout two holes, 1" apart for the wood screws to pass through the baseboard and into the block.

( ) 3) Drill the two holes in the baseboard with a #19 or a 3/16" drill and countersink the underside of the baseboard. Hold the amplifier mount in position and mark the block through the holes in the baseboard. Drill two 3/32" holes, 3/4" deep at the locations marked on the block.

( ) 4) Using two #10X 1" flathead wood screws, mount the amplifier in position. If the mounting appears satisfactory, remove the amplifier for installation later.

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INSTALLING THE MOTOR CAPACITORS

( ) 1) Refer to the CAMERA ASSY drawing and install the two .68 ufd motor capacitors in parallel on the top and center terminals of the terminal strip. Pass the capacitor leads through and around the terminals and cut off the excess wire. Do not solder the wires at this time.

INSTALLING THE ANGLE BRACKET

The ANGLE BRACKET is used to support the output signal jack, the input power switch and the rubber grommet for the line cord. It mounts with two screws near the right rear corner of the baseboard.

( ) 1) Refer to the CAMERA ASSY drawing and position the ANGLE BRACKET at the back edge of the baseboard as shown in the drawing. Mark the location of the two mounting screw holes through the holes in the bracket. Drill holes through the baseboard at this points with a #28 or a 5/32" drill bit. Countersink these holes on the bottomside of the baseboard.

( ) 2) Locate the switch, grommet and RCA jack. Install them on the bracket with the ground lug for the jack on the backside of the bracket. Position the switch so the lever moves in a vertical direction. Put the bracket assembly aside for installation later.

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INSTALLING THE PHOTOCELL LIGHT SHIELD ASSEMBLY

( ) 1) Refer to the CAMERA ASSY drawing and position the light shield in the center of the baseboard, behind the camera panel. Locate the two 3/8"X3/8"x5/8" support blocks on the rear edge baseboard. Use white glue to cement these to the baseboard. These will support the two wood screws used to hold the rear cover in place. Use a ball point pen to punch through the foil over the two corner holes on the rear cover.

( ) 2) Flare the felt gasket at the open end of the light shield so that when it presses against the camera panel, there is good contact between it and the panel all around. This is to prevent light reaching the photocell from behind the disk. With the light shield centered on the baseboard and the tube itself held parallel to the baseboard, mark the two support blocks through the corner holes in the rear cover. Use a 1/16" bit to drill through the blocks at the points marked.

( ) 3) Place the light shield in position and install two 4X 1/2" round head wood screws with flat washers in the corner holes of the rear cover. Be careful to not tear the foil when tightening these screws. Check the felt gasket again to see that it contacts the back of the panel all around.

WIRING AND FINAL ASSEMBLY

( ) 1) Refer to the CAMERA ASSY drawing and install the amplifier/mounting block assembly using two #10X 1" flathead wood screws.

( ) 2) Install the angle bracket using two 6X32X1/2" screws, washers and nuts.

( ) 3) Refer to the camera wiring part of the AC POWER WIRING diagram and begin by wiring the motor to the terminal strip. Leave approximately 1" of slack in each motor lead. When connecting wires to terminals in the following steps, pass the wire through the terminal and once around it. Cut off any extra wire length. Be careful that none of the wire strands touch adjacent terminals.

( ) 4) Connect the Black motor lead to the top terminal on the terminal strip. Do not solder this terminal yet.

( ) 5) Connect both the Brown and the Red wires to second terminal from the top. Do not solder this terminal yet.

( ) 6) Connect the Blue motor lead to the third terminal from the top. This terminal also has two capacitors wires connected to it. Solder it now.

( ) 7) Connect one of the Black wires from the amplifier to the top terminal. Do not solder this terminal yet.

( ) 8) Connect the second Black wire from the amplifier to second terminal from the top. Do not solder this terminal yet.

( ) 9) Pass approximately 12" of line cord through the rubber grommet. Tie a single overhand knot in the wire 11" from the end. Pull the knot fairly tight. This knot will act as a strain relief for the line cord. Using a wire cutter, snip the material between the two wires at the end of the line cord and pull the wires apart up to the knot. Strip the end of one of the wires and connect it to the top terminal. If the wire is too short (or too long), loosen the knot and tie it in another location. This terminal should now have five wires on it; two from the capacitors, two Black wires, plus one from the cord. Solder this terminal now.

( ) 10) Cut and strip the second wire from the line cord approximately 2" from the knot. Connect and solder this wire to the lower switch terminal. Connect one end of a 11" length of hookup wire to the upper terminal of the switch. Twist this wire loosely around the first wire of the line cord and connect and solder its other end to the second terminal from the top on the terminal strip. (The twisting is done just to keep the wires together)

( ) 11) This completes the AC power wiring. Check your connections on the switch and the terminal strip. Look for any small strands of wire that may be touching adjacent terminals or parts.

( ) 12) Two wires exit the bottom of the amplifier. One has a plug that connects to jack on the light shield assembly. Connect that now. The other wire connects to the jack on the angle bracket. Strip 1" of insulation from this wire. Notice that it is a shielded wire. Connect the center wire to the center terminal of the jack. Twist the wire strands of the shield together and connect them to the ground lug and solder both connections on the jack.

WIRING AND FINAL ASSEMBLY, continued.

( ) 13) Refer to the HUB drawing. Locate the hub, two coupling springs and rubber grommet. Place the scanning disk on the hub so when the disk is rotated clockwise, the hole pattern in the disk appears to move towards the center. Install the coupling springs. Use long nose pliers to handle the ends of the springs. Place the hub and disk on the motor shaft. Position the hub so the coupling springs just clear the camera panel behind the disk. Install and tighten the Allen set screw in the hub. Use a small screwdriver to install the rubber grommet against the disk, but with the disk free enough to rotate on the hub. The springs should have just enough tension to stay in place. Stretch the springs if necessary.

( ) 14) Using an ohmmeter, measure the resistance on the prongs of the line cord. Operate the power switch and see that the resistance changes from infinite (open circuit), to 150 +/- 30 ohms. Check your wiring carefully if it does not. If the resistance measurement is satisfactory, set the power switch OFF, (the resistance reading is infinite), plug the cord into a wall outlet and turn on the switch. Viewed from the front, the disk should begin rotating in a clockwise direction. Turn the switch off. Allow the disk will coast to a stop.

This completes the camera assembly except for a cabinet and lens.

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CABINET ASSEMBLY

The cabinet is made up of 5 panels of 1/4" plywood. Refer to the CAMERA CABINET drawing. One side of each panel has a furniture grade veneer. Place this surface towards the outside for best appearance. When clamping the various panels in place for gluing, use a square wherever necessary to be sure that all adjacent panels are at right angles to each other. Use white glue for all joints and keep glue off the outside surface of the cabinet.

( ) 1) Refer to the drawing and notice that the top panel lays on top of the front and sides of the cabinet and the bottom panel is inside the front and sides. Begin by cementing the top to the front and then add the two side panels. Be sure to keep all the edges in alignment. Finally install the bottom panel. Shim or sand the edges as necessary.

( ) 2) To improve the appearance of the cabinet, the three exposed edges of the top panel (front and two side edges) can be covered with a decorative strip. The same holds true for the two side edges of the front panel. A strip of thin veneer is included for that purpose. Cut it into five strips 1/2" wide and cement them in place. As an alternative, decorative molding strips can purchased locally. These are usually 1/8" thick and are available in several styles.

CABINET ASSEMBLY, continued.

( ) 3) In preparation for final finishing, lightly sand or steel wool the surface of the cabinet. Apply any suitable finishing materials of your choice. If desired, acquire and install four rubber feet on the corners of the bottom panel. Install the small VISIONETTE nameplate on the cabinet front, centered above the lens. Install the large nameplate on the baseboard. Use spray adhesive on the back of the plate and the four brass nails provided.

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LENS ASSEMBLY

The lens assembly supplied with the VISIONETTE camera contains a single element duo-convex lens. It is equivalent to a 90 mm , F/2.8 camera lens. Although it has only one element, it will provide adequate resolution for the 24 line television image. The glass element is mounted in telescoping cardboard tubes in a manner so as to allow a focus adjustment over a range of approximately 2 to 4 feet. The tubes are cut to length and any fraying can removed by light sanding. Use white glue during assembly.

( ) 1) Refer to the LENS ASSY drawing and locate the five associated mailing tube sections and lens mount. Begin by gluing a 2 1/4" X 1 1/2" tube section (item #2) into the lens mount. Lay the mount on a flat surface (preferably glass or smooth plastic), with a small weight on the tube. This will assure that the glue dries with the tube "square" to the mount. While the glue dries, glue item #5 into item #4. Align them on a flat surface.

( ) 2) Locate the glass lens in the front tube, item #4. Cut three 1 inch lengths of the wire supplied. These act as a spacer to keep the lens centered in the tube. Evenly space the wires around glass lens and see that the lens is flat against the edge of tube #4. Put a light coat of glue on one end of tube #3 and insert it into tube #4 and against the glass lens. Allow the glue to dry.

( ) 3) Carefully insert tube #3 into tube #2 . Locate and glue tube #1 in place. This completes the lens assembly. For improved appearance, paint the lens mount, tube #2 and #4 with black paint. Do not paint tube #3. Clean the glass lens, center the assembly in the cabinet opening and mount it with 4 wood screws supplied. Push the lens towards the rear as far as it will go.

( ) 4) Slide the camera assembly straight into the cabinet until the disk just touches the back of the lens. Pull the assembly back 1/8" . This will be the starting point for setting the final position of the assembly in the cabinet.

CAMERA FOCUS ADJUSTMENTS

( ) 1) Set up the camera on a level surface with the front of the lens 4 feet from the "Big A" test target included in the drawing set. The lens should be set as far towards the rear as it will go. Illuminate the test target with 75 watt reflector spot bulb or a standard 75 watt lamp in a socket with a 6" to 10" reflector. Place the lamp beside or above the camera approximately 4 feet from the target. Disconnect the RCA plug on the rear of the photo cell shield assembly. See that the plug does not contact any other surface or wiring. Remove the shield assembly from the camera by taking out the two screws holding the shield assembly to the baseboard.

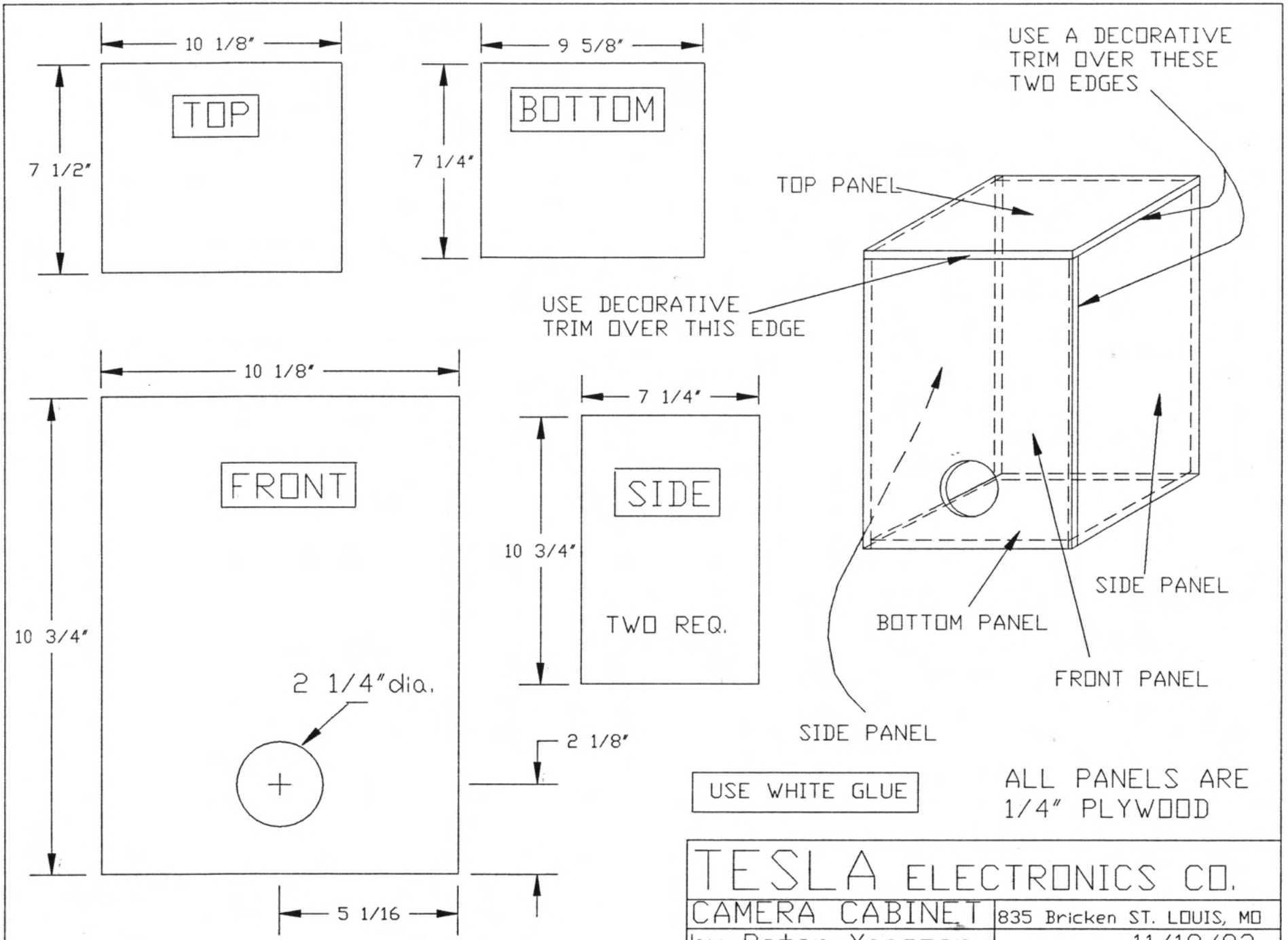
( ) 2) With the light and the camera power turned on, point the camera at the target. You should be able to observe an inverted image of the target in the condenser lens behind the disk. This image is the one focussed on the surface of the scanning disk. While observing, slowly move the camera baseboard back and forth in the cabinet. Keep the assembly centered in the cabinet while doing this. At the position where the image is in sharpest focus, turn power off and secure the camera assembly in the cabinet. Use two 6 X 1/2" wood screws though the holes in baseboard provided for that purpose.

( ) 3) Set the lens to its most forward position and turn the camera power on. While observing the disk image, move the camera closer to the target until the image is again in good focus. Measure and record the distance from the target to the front of the lens. You have now established the range of focus for the lens. Turn the camera power off.

MINIMUM FOCUS DISTANCE = ( ) INCHES

( ) 4) Re-install the shield and reconnect the wire to the RCA jack. Set the lens to the 4 foot setting. Turn the camera power off.

This completes the camera. Preliminary tests of the camera can be performed with an oscilloscope, but the tests are limited to monitoring the video signal and will be inconclusive. Final testing of the camera will require an operating VISIONETTE receiver.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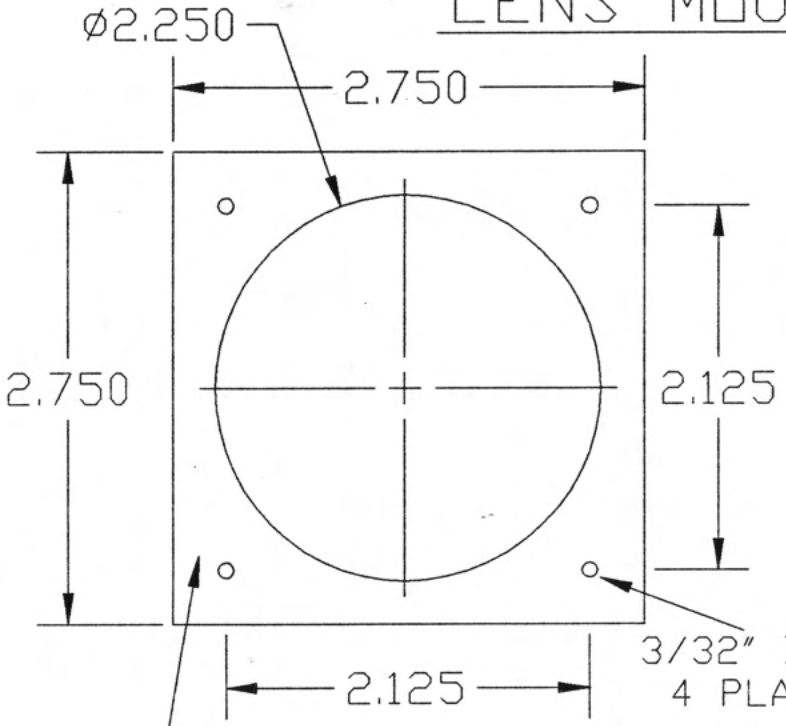
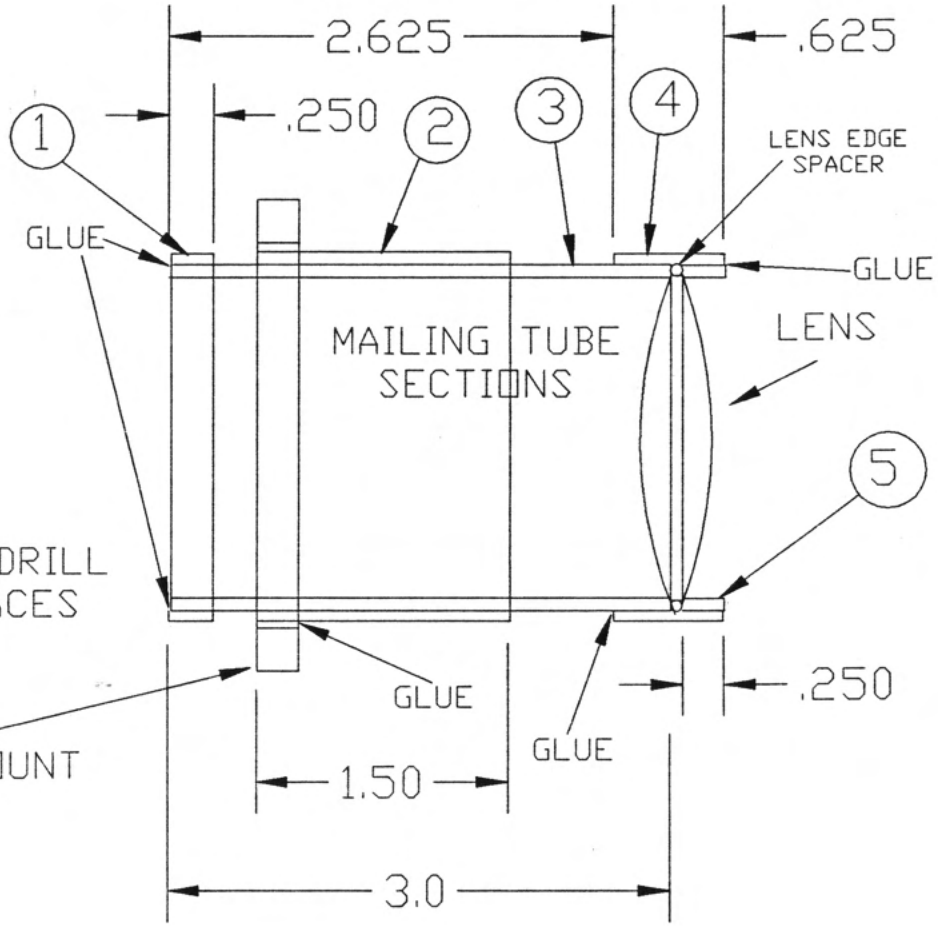
TOP
7 1/2"
9 5/8"
BOTTOM
7 1/4"
USE A DECORATIVE TRIM OVER THESE TWO EDGES
TOP PANEL
USE DECORATIVE TRIM OVER THIS EDGE
10 1/8"
FRONT
10 3/4"
2 1/4" dia.
2 1/8"
5 1/16
7 1/4"
SIDE
10 3/4"
TWO REQ.
SIDE PANEL
BOTTOM PANEL
FRONT PANEL
SIDE PANEL
USE WHITE GLUE
ALL PANELS ARE 1/4" PLYWOOD
TESLA ELECTRONICS CO.
CAMERA CABINET
835 Bricken ST. LOUIS, MO
by Peter Yanczer
11/18/92

LENS MOUNT

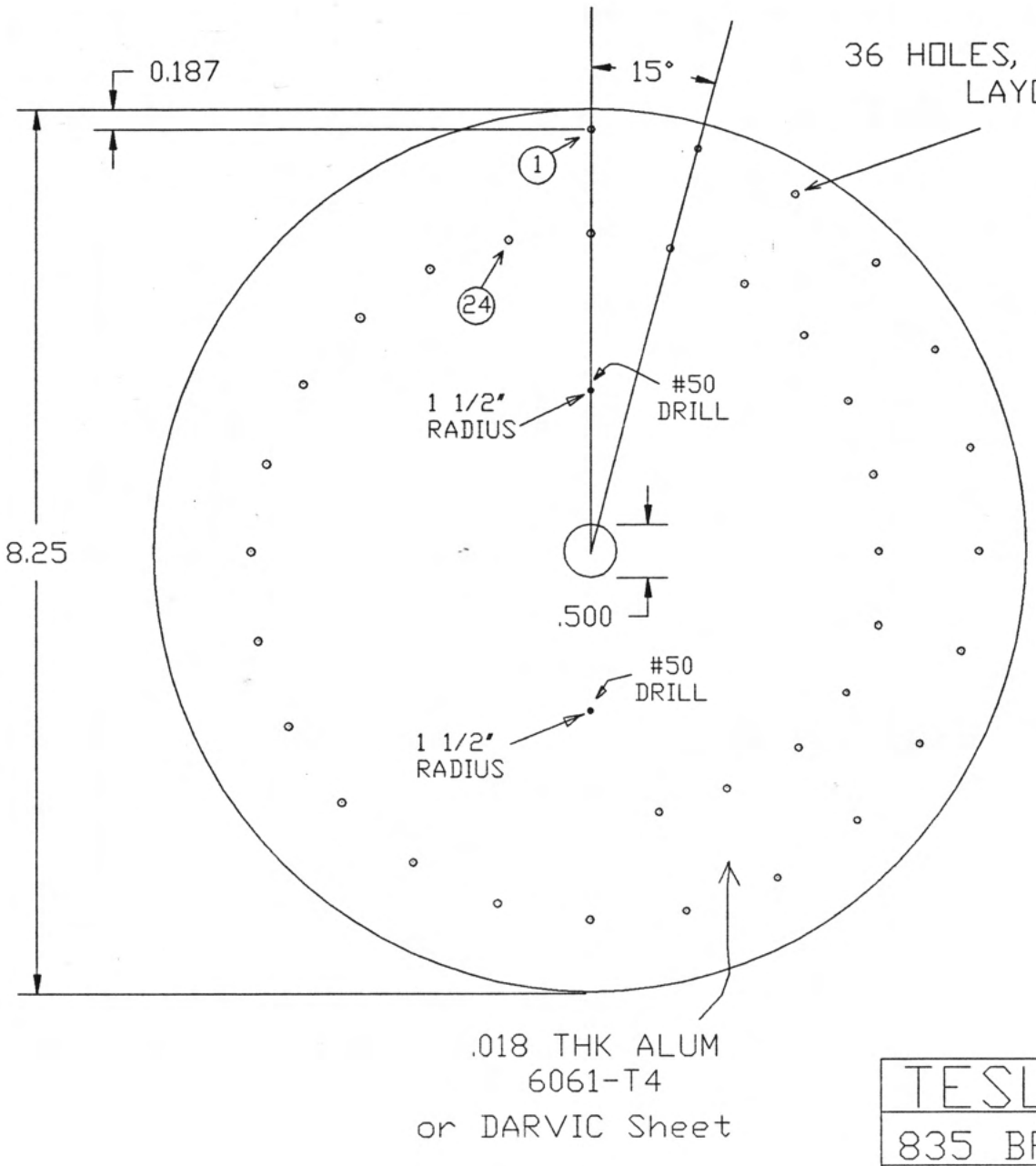


USE WHITE GLUE



1. 2 1/4" X 1/4" Mailing Tube
2. 2 1/4" X 1 1/2" Mailing Tube
3. 2 1/8" X 3.0" Mailing Tube
4. 2 1/4" X 5/8" Mailing Tube
5. 2 1/8" X 1/4" Mailing Tube

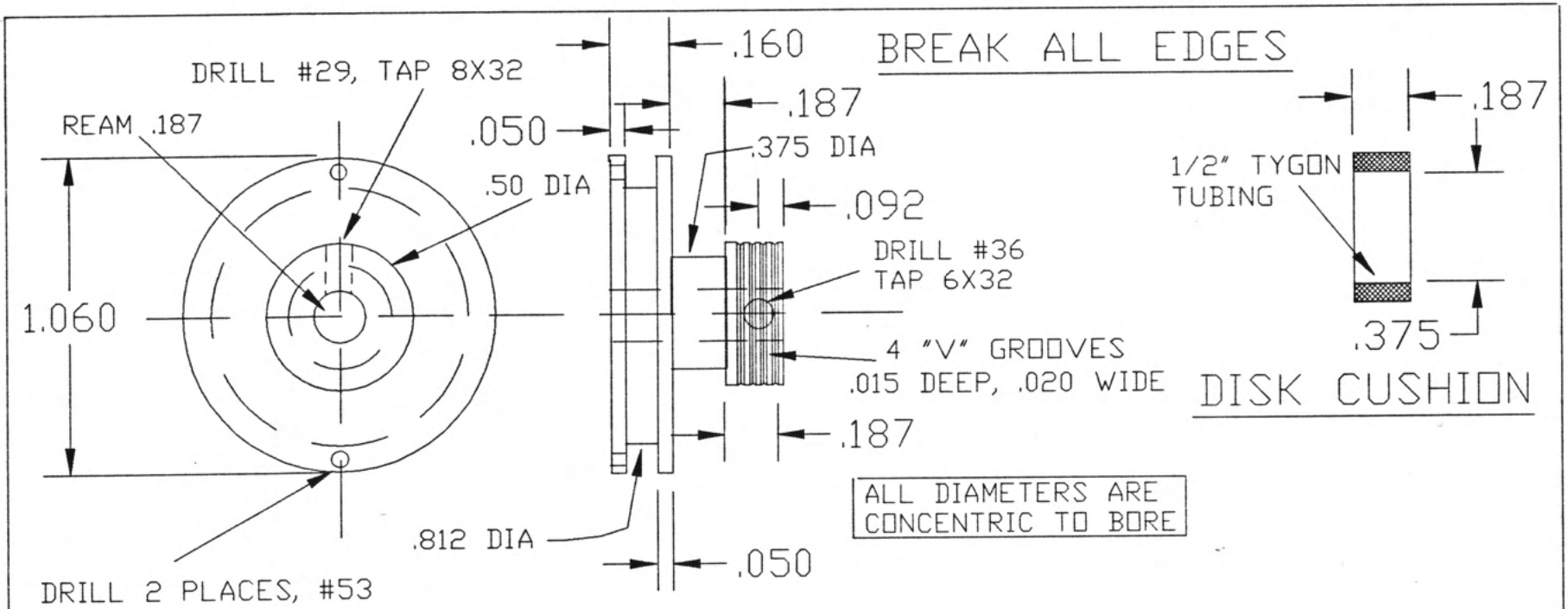
TESLA ELECTRONICS CO.	
LENS ASSY.	3/22/92
DWG. BY P. YANCZER	PH. 314-822-1748

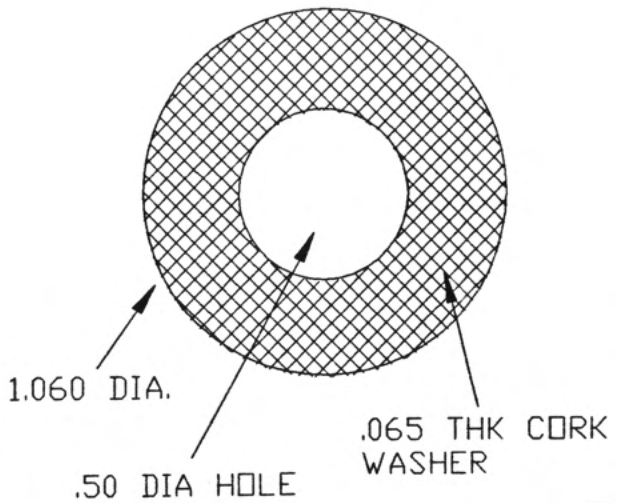


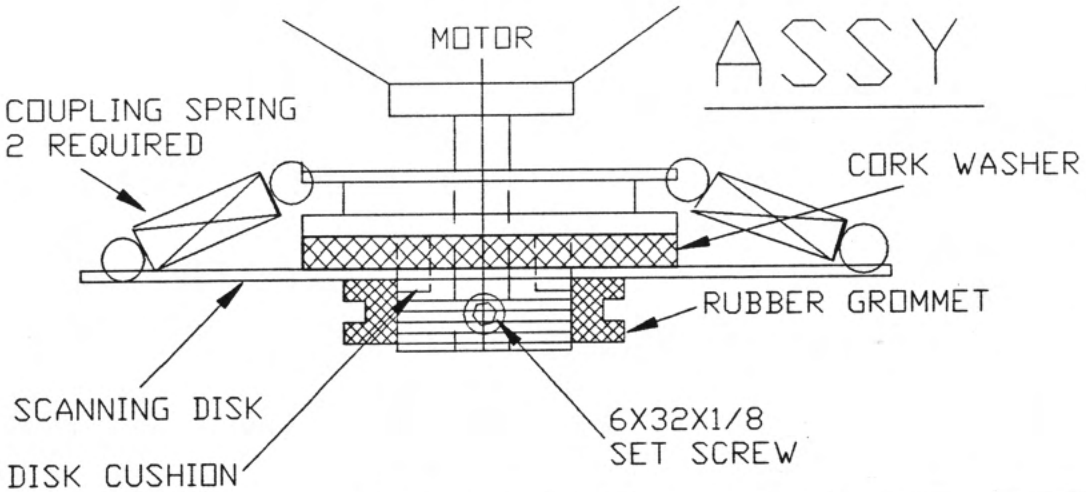
36 HOLES, .040 DIA., ARRANGED IN A SPIRAL LAYOUT, CONTRACTING .040" PER 15 DEGREE INCREMENT.

NOTE: VERSION 2 OF THIS DISK CONTAINS THE FIRST 24 SPIRAL HOLES ONLY, INSTEAD OF THE 36 SHOWN ABOVE.

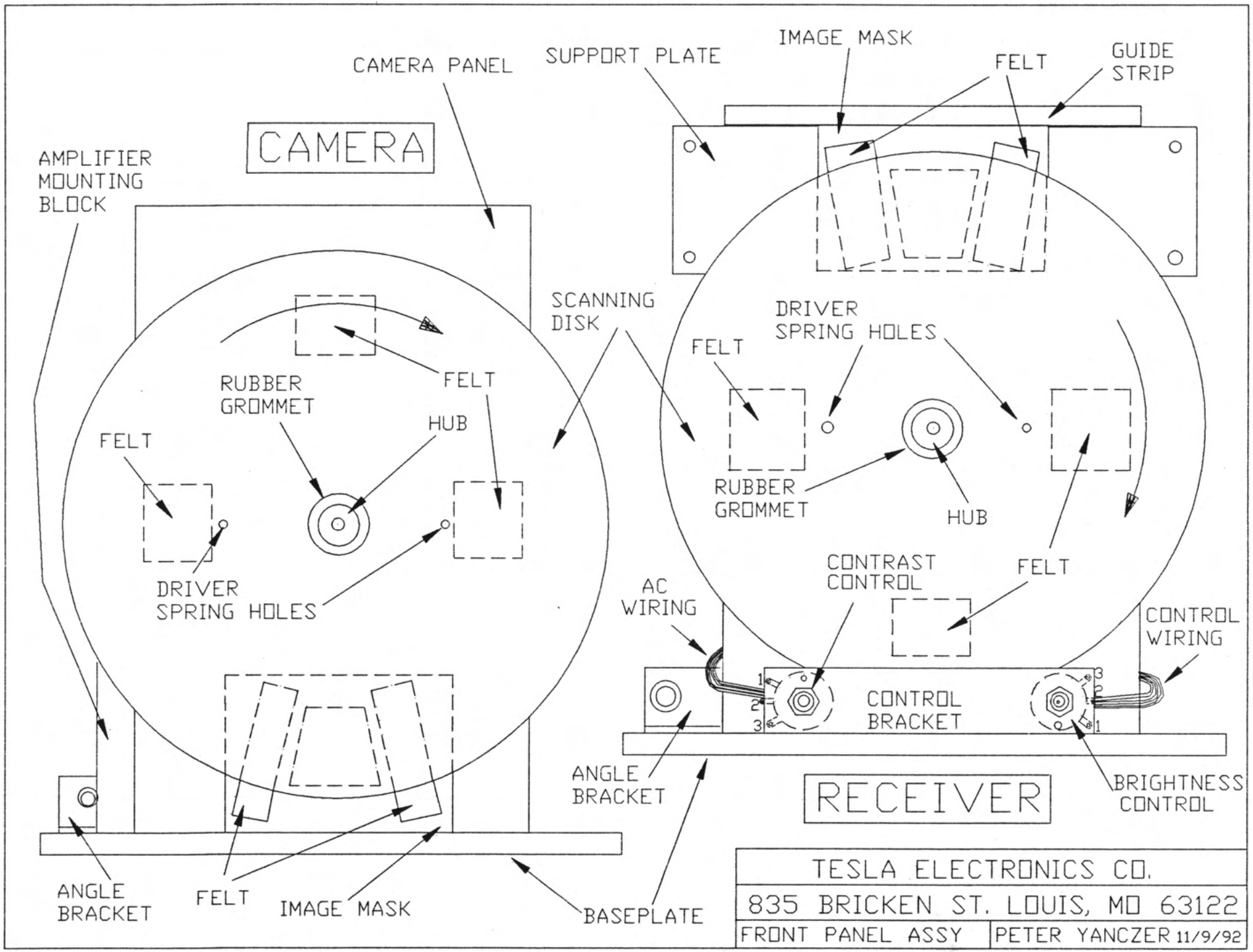
TESLA Electronics Co.	
835 BRICKEN, ST. LOUIS, MO 63122	
SCANNING DISK	Ph. 314-822-1748
DATE: 1/4/92	DWG by: PETER YANCZER



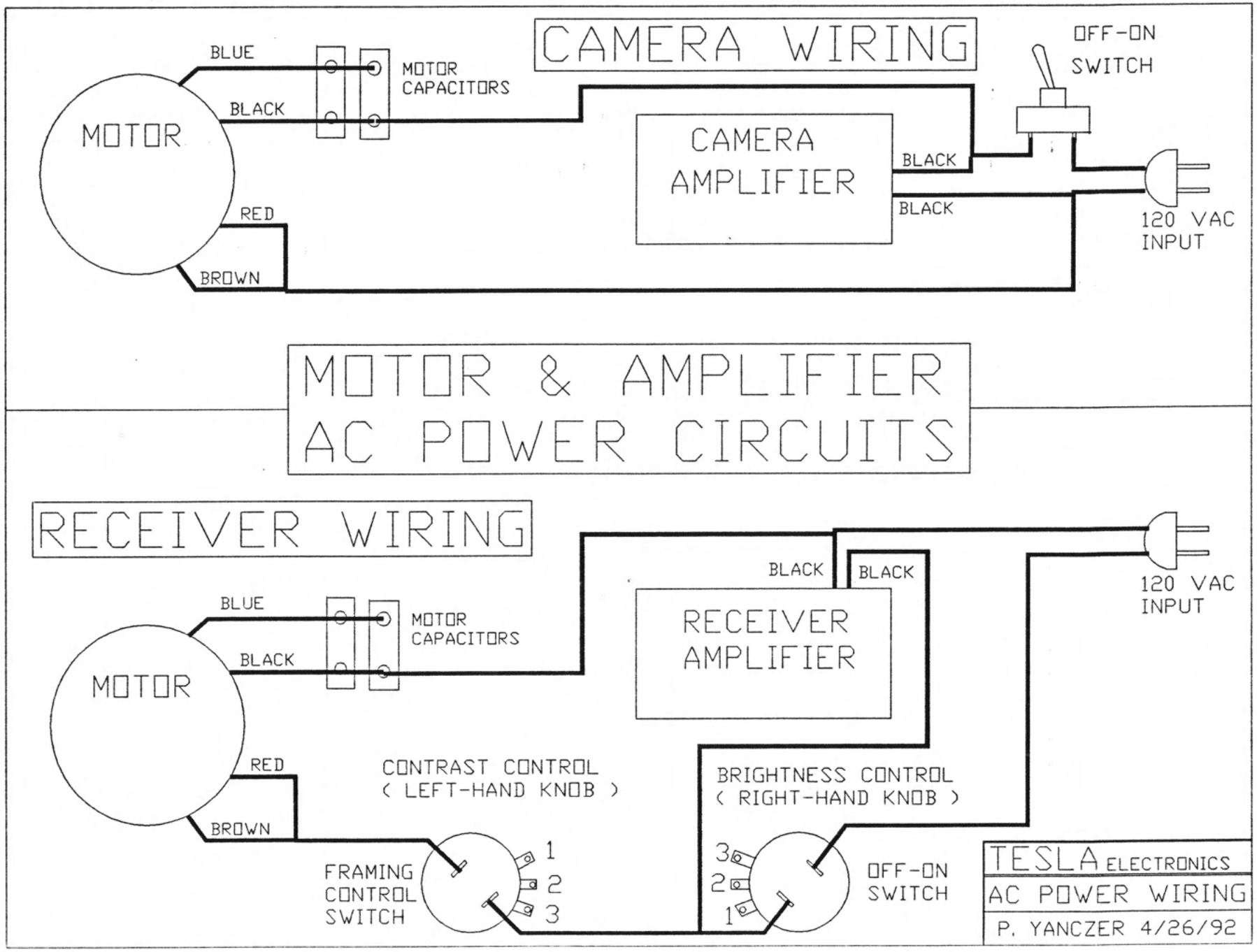


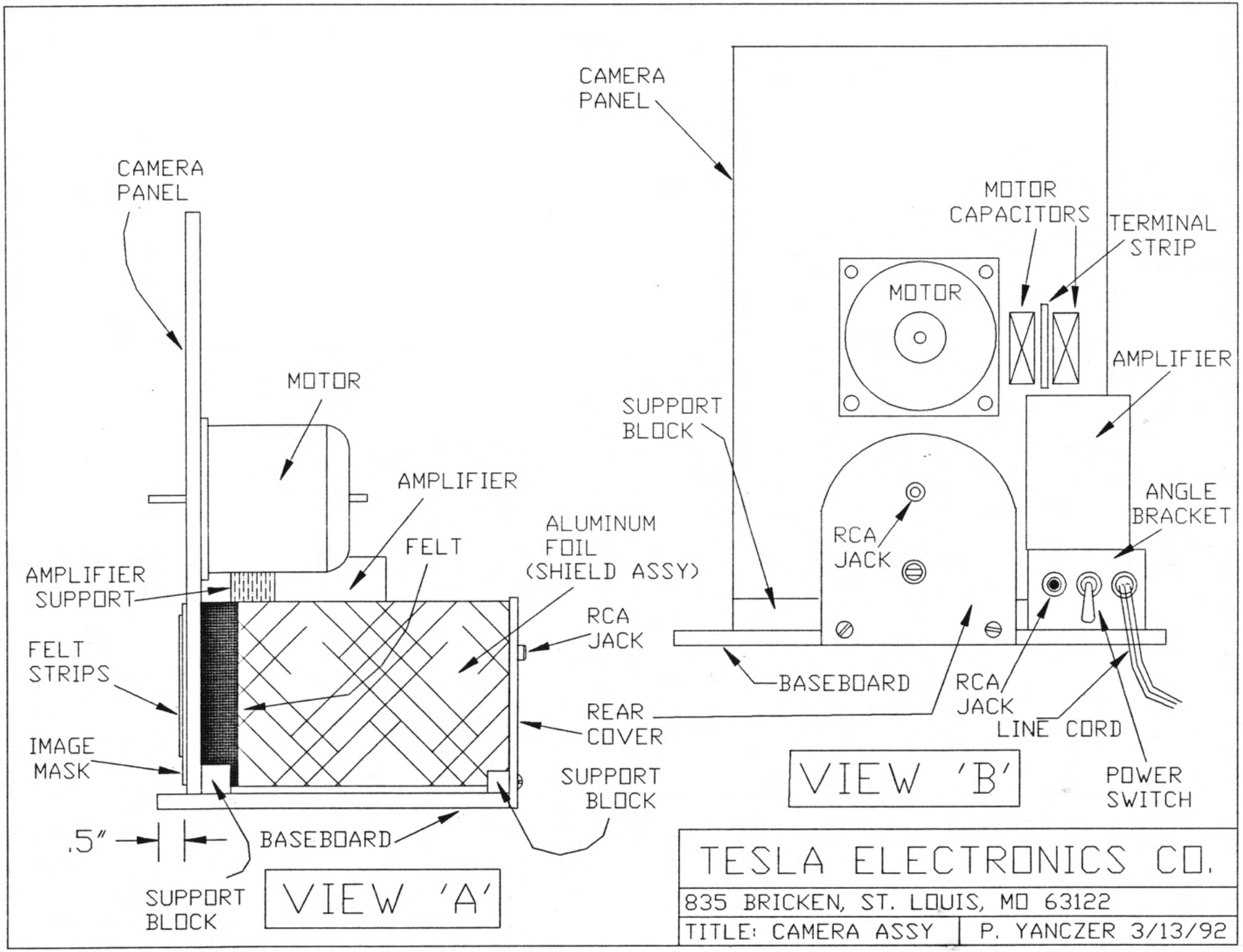


TESLA ELECTRONICS CO.		
835 BRICKEN, ST. LOUIS, MO 63122		
REV B 5/3/92 PY	TITLE: HUB, No. 1002	PH: 314-822-1748
	DATE: 1/31/92	DWG by: P. F. YANCZER



TESLA ELECTRONICS CO.	
835 BRICKEN ST. LOUIS, MO 63122	
FRONT PANEL ASSY	PETER YANCZER 11/9/92

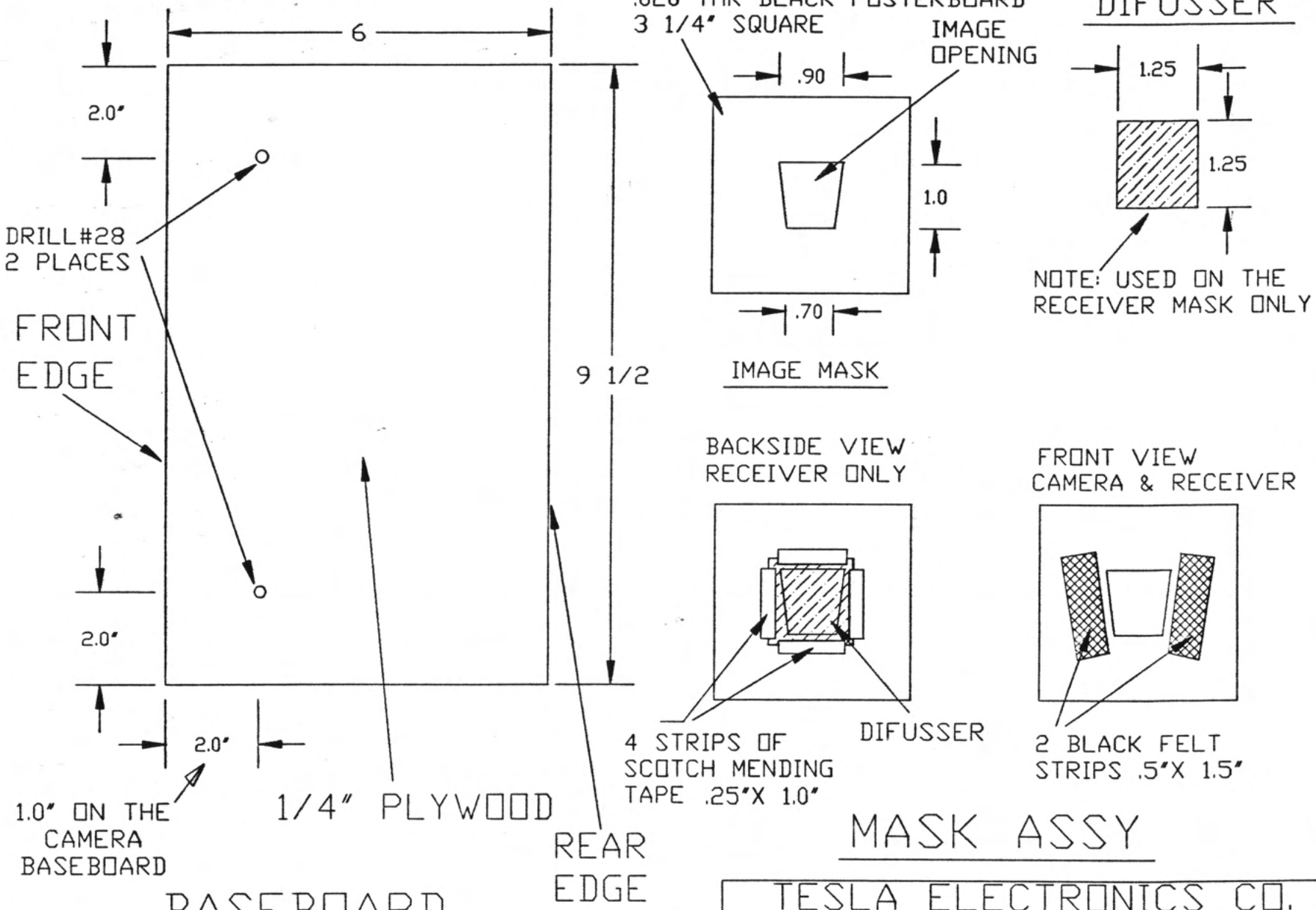

CAMERA WIRING
BLUE
BLACK
MOTOR
MOTOR CAPACITORS
RED
BROWN
CAMERA AMPLIFIER
BLACK
BLACK
OFF-ON SWITCH
120 VAC INPUT
MOTOR & AMPLIFIER AC POWER CIRCUITS
RECEIVER WIRING
BLUE
BLACK
MOTOR
MOTOR CAPACITORS
RED
BROWN
RECEIVER AMPLIFIER
BLACK
BLACK
120 VAC INPUT
CONTRAST CONTROL (LEFT-HAND KNOB)
BRIGHTNESS CONTROL (RIGHT-HAND KNOB)
FRAMING CONTROL SWITCH
1
2
3
3
2
1
OFF-ON SWITCH
TESLA ELECTRONICS
AC POWER WIRING
P. YANCZER 4/26/92



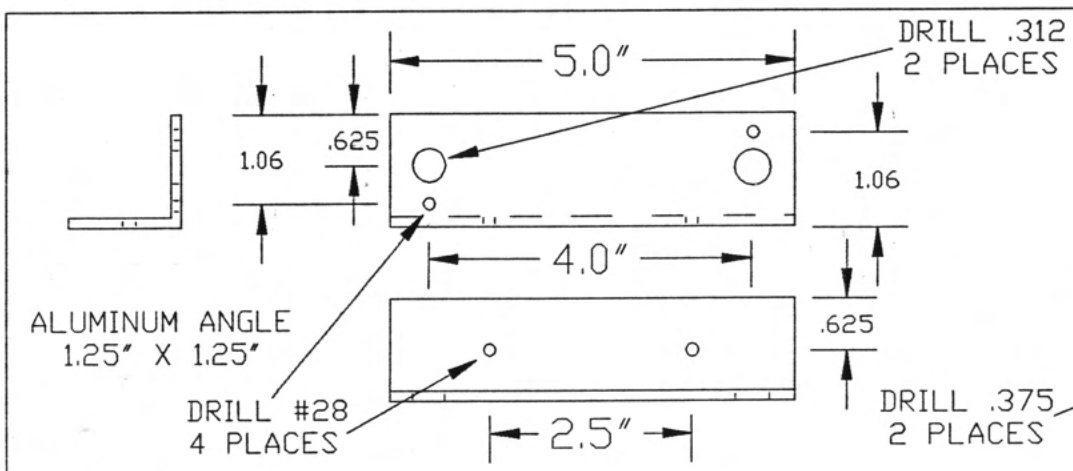
TESLA ELECTRONICS CO.

835 BRICKEN, ST. LOUIS, MO 63122

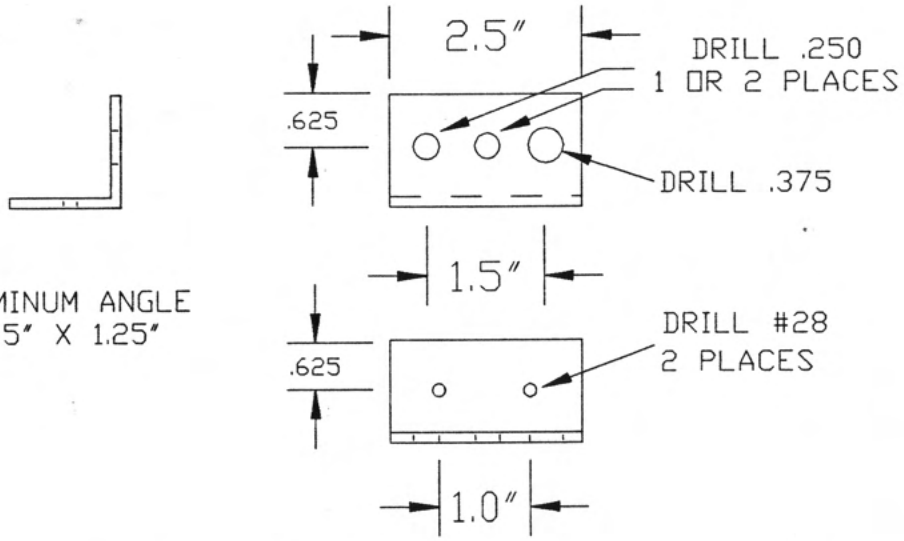
TITLE: CAMERA ASSY | P. YANCZER 3/13/92



TESLA ELECTRONICS CO.	
835 BRICKEN, ST. LOUIS, MO 63122	
TITLE: BASEBRD/MASK	PH: 314-822-1748
DATE: 1/27/92	DWG by: P. F. YANCZER

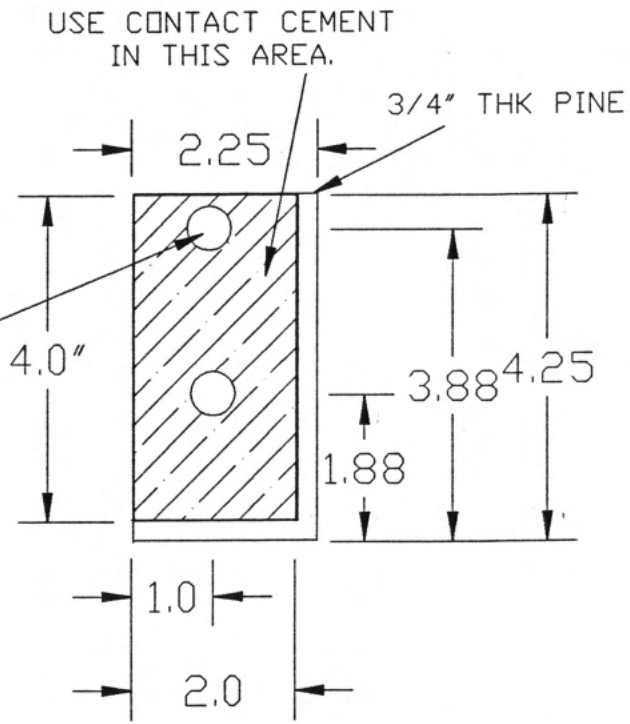


CONTROL BRACKET



SUPPORT BRACKET

NOTE: THE BRACKET FOR THE RECEIVER DOES NOT REQUIRE THE CENTER .250" DIA. HOLE



AMPLIFIER MOUNT

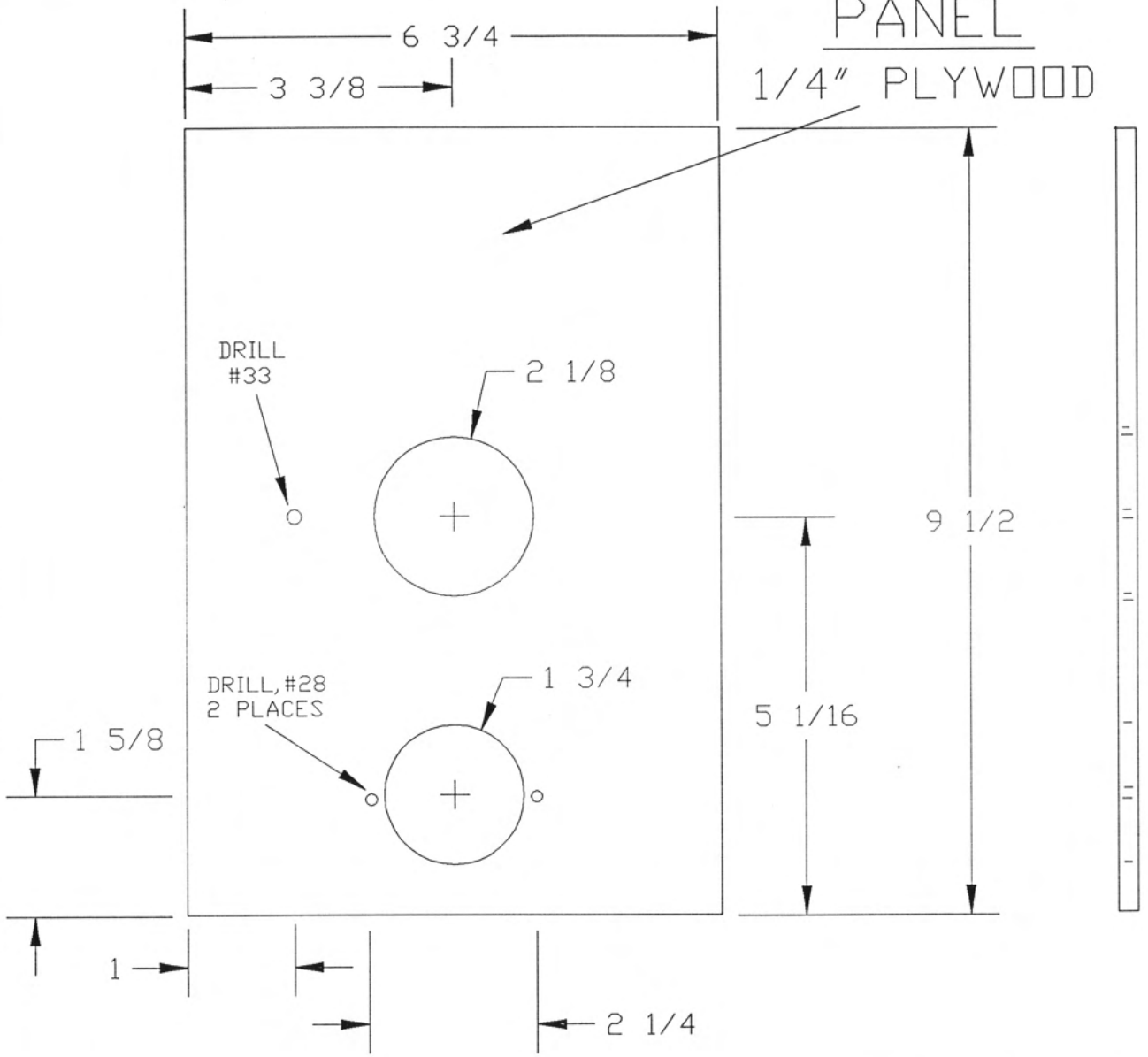
NOTE: HOLES PROVIDE CLEARANCE FOR AMPIFIER SCREWS.

NOTE: AMPLIFIER CASE IS CEMENTED TO MOUNTING BLOCK USING CONTACT CEMENT.

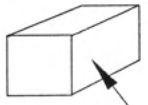
TESLA ELECTRONICS CO.	
835 BRICKEN, ST. LOUIS, MO 63122	
TITLE: MISC ITEMS	PETER YANCZER 3/17/92

PANEL

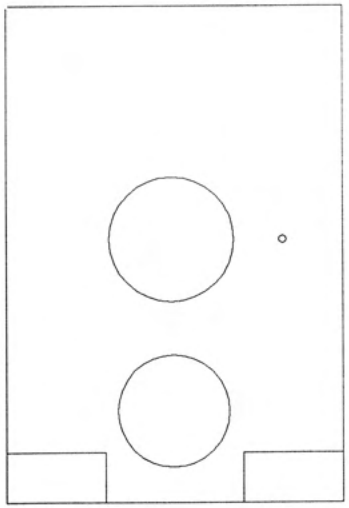
1/4" PLYWOOD



SUPPORT BLOCK



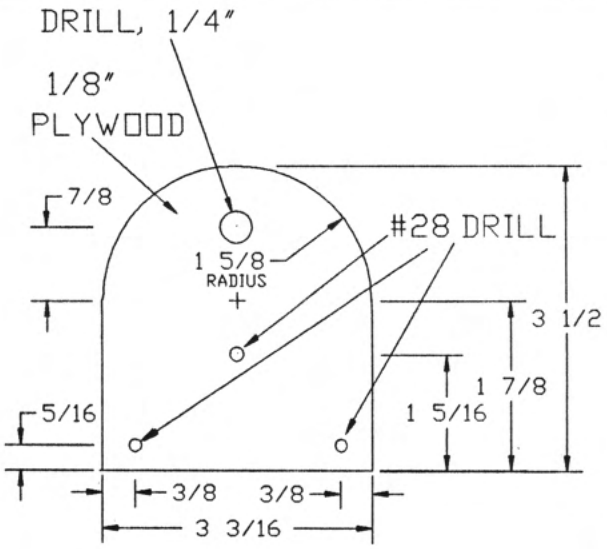
3/4 X 3/4 X 1 1/4"
FIR OR PINE BLOCK
2 REQUIRED



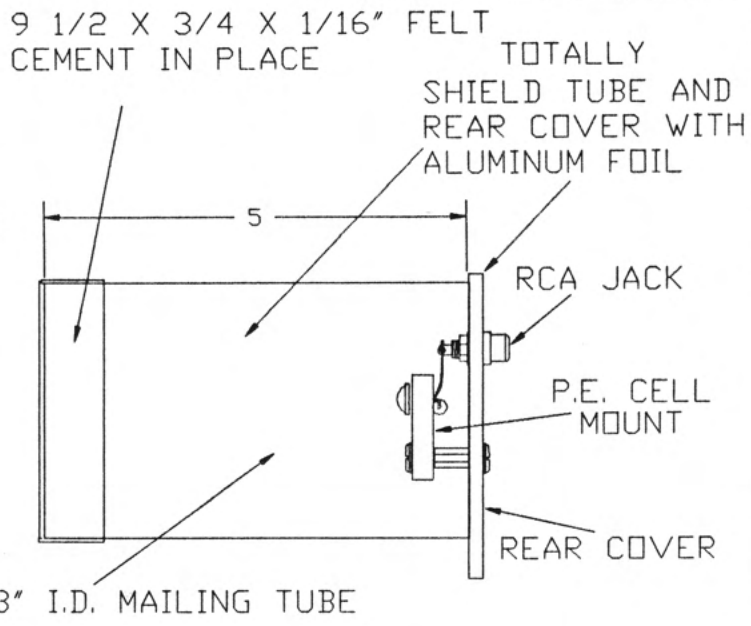
ASSY

TESLA ELECTRONICS CO.	
835 BRICKEN, ST. LOUIS, MO 63122	
TITLE: CAMERA PANEL	PH: 314-822-1748
DATE: 1/24/92	DWG by: P. F. YANCZER

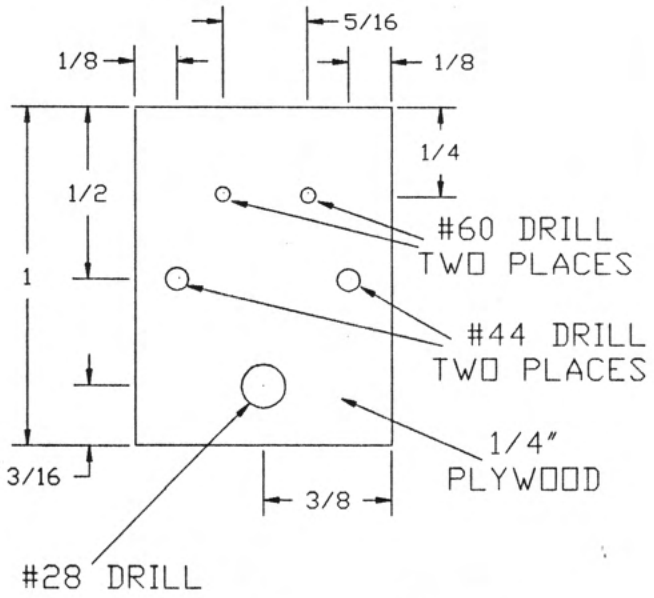
SHIELD ASSY



REAR COVER

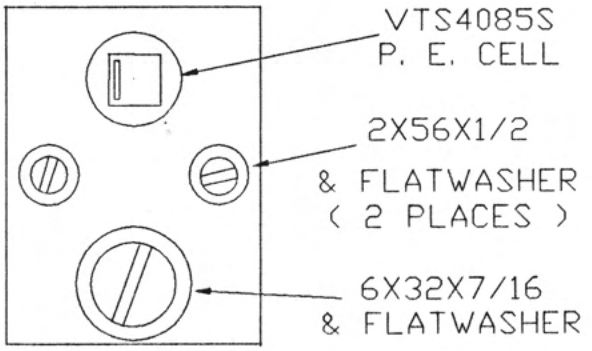


SUPPORT BLOCKS (2 REQ.)
3/8"X3/8"X5/8" PINE

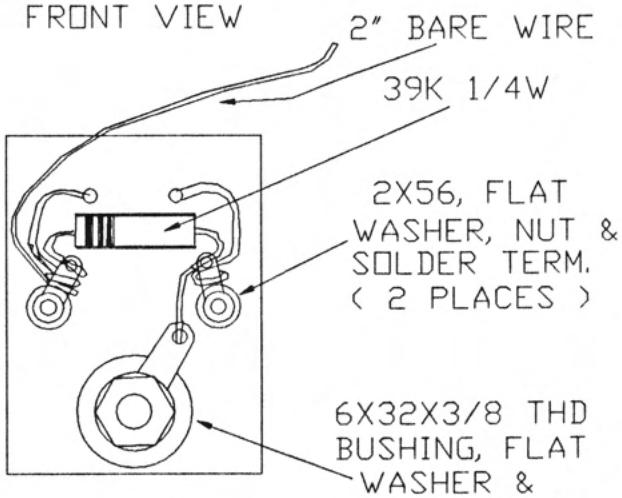


P. E. CELL MOUNT

P. E. CELL ASSY



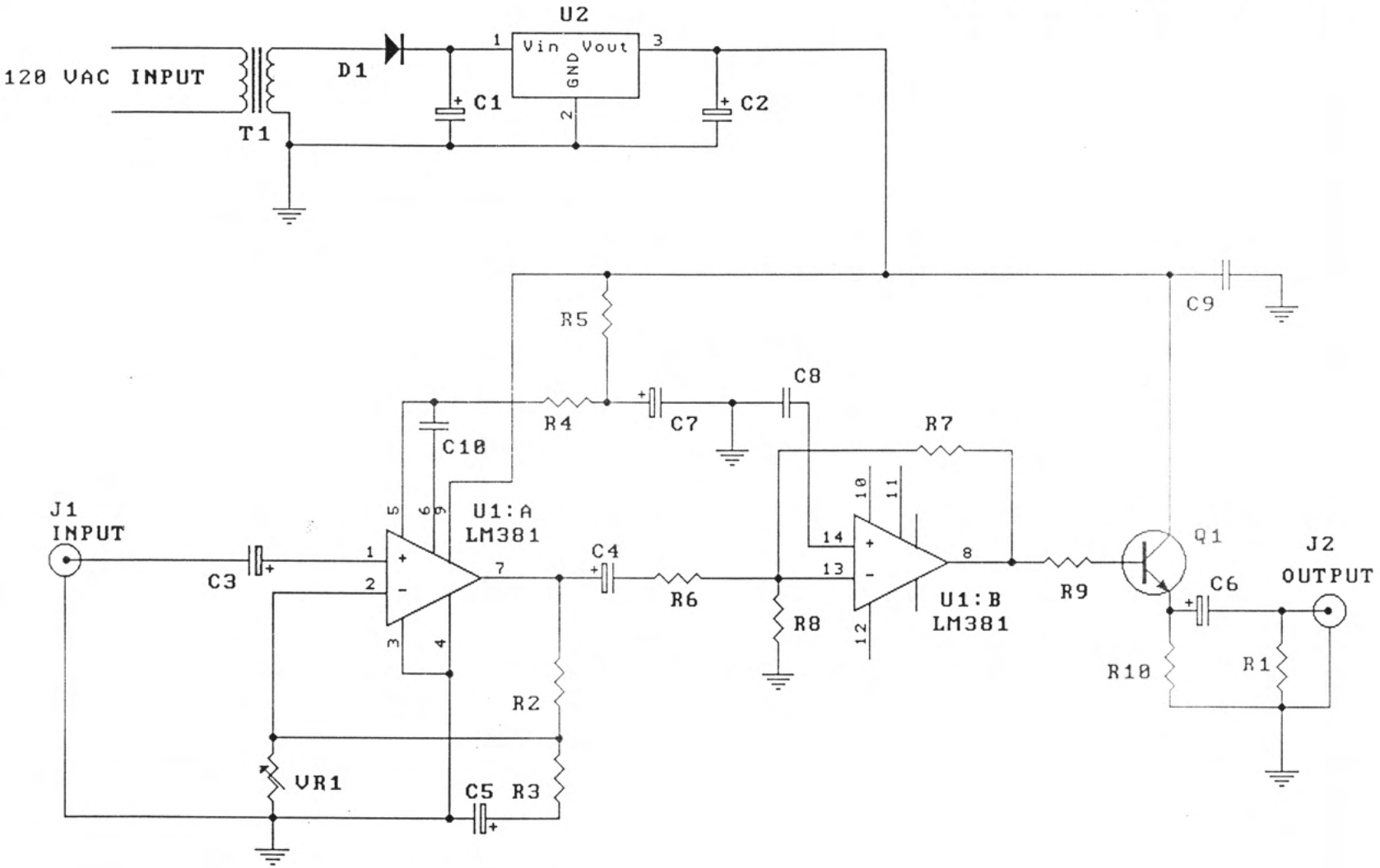
FRONT VIEW



REAR VIEW

TESLA ELECTRONICS CO.	
835 BRICKEN ST. LOUIS, MO 63122	
CAMERA DRAWING	PH. 314-822-1748
SHIELD ASSY.	REV. A 6/17/93
Date: 12/29/91	DWG by Peter Yanczer

VISIONETTE CAMERA AMPLIFIER



Title	VISIONETTE CAMERA AMPLIFIER		
Size A	Number XXX 001		Revision B
Date: 28-FEB 1993		Sheet 1 of 1	
File: CAM_AMP/1		Drawn By: YANCZER	

PROTEL-SCHEMATIC Bill of Material For CAM_AMP 16:34 28-FEB-1993 Page : 1

DESCRIPTION	QUAN.	COMPONENT NAME(S)			
.1uf/100v	2	C8	C9		
1.2k/.25w	1	R10			
1N4002	1	D1			
10k/.25w	1	R6			
10uf/35v	4	C2	C3	C4	C7
12k/.25w	1	R8			
15k/.25w	1	R1			
18vac	1	T1			
20k/.1w	1	VR1			
30pf	1	C10			
36/.25w	1	R3			
36k/.25w	1	R2			
39k/.25w	1	R5			
100/.25w	1	R9			
100k/.25w	2	R4	R7		
100uf/25v	1	C6			
220uf/35v	1	C1			
470uf/16v	1	C5			
7824	1	U2			
D882	1	Q1			
INPUT	1	J1			
LM381	1	U1			
OUTPUT	1	J2			

VISIONETTE Camera parts list TESLA Electronics Co.

314-822-1748 3/18/93 PG 1

ITEM #	ITEM NAME	QTY	DESCRIPTION	COST @
C01	LENS ASSEMBLY	1	2 3/4"X 2 3/4"X 1/4" MOUNT	3.75
C01A		4	#2 X 1/2" WOOD SCREW	
C01B		1	LENS ELEMENT	5.50
C01C		1	2 1/8" dia. by 3" LONG TUBE	1.75
C01D		1	2 1/4" dia by 1 1/2" LONG TUBE	1.75
C01E		2	2 1/4" dia. by 1/4" LONG TUBE	1.75
C01F		1	2 1/4" dia BY 5/8" LONG TUBE	1.75
C01G		1	12" LENGTH, HOOKUP WIRE	
C02	CABINET ASSY	1	BOTTOM PANEL	2.75
C02A		2	SIDE PANEL	2.75
C02B		1	TOP PANEL	2.75
C02C		1	FRONT PANEL	3.75
C03	BASEBOARD	1	BASEBOARD	2.75
C04	CAMERA PANEL	1	CAMERA PANEL	4.50
C04A		2	PANEL SUPPORT BLOCK	1.00
C04B		1	CHASSIS NAME PLATE	6.50
C04C		1	TERMINAL STRIP	.75
C04D		4	# 10 X 1" F.H. WOOD SCREW	
C04E		3	4 X 40 X 1/2" F.H. with W&NTS	
C04F		4	6 X 32 X 3/4" F.H. with W&NTS	
C05	CONDENSER LENS	1	CONDENSER LENS	6.50
C06	SCANNING DISK	1	SCANNING DISK	36.00

VISIONETTE Camera parts list TESLA Electronics Co.
314-822-1748 3/18/93 PG 2

ITEM #	ITEM NAME	QTY	DESCRIPTION	COST @
C07	MASK	1	MASK	3.50
C7A		3	1" X 1" FELT	
C7B		2	1/2" X 2 1/2" FELT	
C08	MOTOR	1	SYNCHRONOUS MOTOR	30.00
C09	MOUNTING BLOCK	1	AMPLIFIER MOUNTING BLOCK	2.75
C10	COAXIAL CABLE	12'	COAXIAL CABLE WITH PLUGS	3.50
C11	LINE CORD	9"	AC LINE CORD	1.75
C12	LIGHT SHIELD	1	3" dia X 5" LONG TUBE	3.00
C13	AMPLIFIER	1	CAMERA AMPLIFIER	139.50
C14	ANGLE BRACKET	1	ANGLE BRACKET	4.75
C14A		1	TOGGLE SWITCH	1.75
C14B		1	RUBBER GROMMET	.25
C14C		2	RCA JACK	1.00
C14D		1	12" LENGTH, HOOKUP WIRE	
C14E		2	6 X 32 X 1/2" F.H with W&NTS	
C14F	DECORATIVE STRIP	4	3/8"X 12" WOOD STRIP	
15	HUB	1	SCANNING DISK HUB ASSY	22.50
C15A		1	RUBBER GROMMET	.25
C15B		2	DISK DRIVE SPRINGS	1.50
C16	MOTOR CAP	2	MOTOR CAPACITOR	2.00
C17	REAR COVER	1	LIGHT SHIELD REAR COVER	3.00
C17A		2	LIGHT SHLD SUPPORT BLOCKS	.75

ITEM #	ITEM NAME	QTY	DESCRIPTION	COST @
C17B		1	1" X 12" FELT STRIP	1.50
C17C		1	PHOTO CELL	8.50
C17D		1	39K RESISTOR	.50
C17E		1	6 X 32 X 3/8" THD BUSHING	.75
C17F		2	2 X 56X 1/2" R.H. with W&NTS	
C17G		2	#2 SOLDER TERMINALS	
C17H		2	6 X 32 X 3/8" R.H. SCREW	
C18	NAME PLATE	1	CABINET NAME PLATE	6.00
C19	P. E. CELL MOUNT	1	P. E. CELL MOUNTING BLOCK	3.00
C20	DOCUMENTATION	SET	INSTRUCTIONS & DRAWINGS	35.00